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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/929,714	08/13/2001	Andreas Falkenberg	2001P14844US	8927

7590

03/24/2006

Siemens Corporation  
Attn: Elsa Keller, Legal Administrator  
Intellectual Property Department  
186 Wood Avenue South  
Iselin, NJ 08830

EXAMINER

TORRES, JUAN A

ART UNIT

PAPER NUMBER

2611

DATE MAILED: 03/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/929,714

Applicant(s)

FALKENBERG, ANDREAS

Examiner

Juan A. Torres

Art Unit

2631

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 06 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,2,4-12,14-17 and 19-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-12 and 14 is/are allowed.
- 6) ☒ Claim(s) 1,2,4-9,15-17 and 19-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>03-06-06</u> | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Response to Arguments***

Applicant's arguments with respect to claims 1, 2, 4-19, 15-17, and 19-22 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments, see Amendment - After Non-Final Rejection, filed 03/06/2006, with respect to claim 10 have been fully considered and are persuasive. The rejection of claim 10 has been withdrawn.

### ***Claim Rejections - 35 USC § 112***

The modifications to the claims were received on 03/06/2006. These modifications are accepted by the Examiner.

In view of the amendment filed on 03/06/2006, the Examiner withdraws the claim rejections under 35 USC 112 second paragraph to claim 19 of the previous Office action.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1, 2, 4-9, 15-17, and 19-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claim 1, claim 1 is related to a method for modulating or demodulating a signal, without providing any practical application that produces a useful, tangible and concrete result. Signals, per se, are non-statutory subject of matter in the category of abstract ideas.

As per claims 2, and 4-9, they are rejected because they depend directly or indirectly from claim 1.

As per claim 15, claim 15 is related to modulating or demodulating a signal, without providing any practical application that produces a useful, tangible and concrete result. Signals, per se, are non-statutory subject of matter in the category of abstract ideas.

As per claims 16-17, and 19-20, they are rejected because they depend directly or indirectly from claim 15.

As per claim 21, claim 21 is related to a method for modulating a signal, without providing any practical application that produces a useful, tangible and concrete result. Signals, per se, are non-statutory subject of matter in the category of abstract ideas.

As per claim 22, claim 22 is related to a method for demodulating a signal, without providing any practical application that produces a useful, tangible and concrete result. Signals, per se, are non-statutory subject of matter in the category of abstract ideas.

### ***Allowable Subject Matter***

Claims 10-12 and 14 are allowed.

The following is a statement of reasons for the indication of allowable subject matter: Claims 10-12 and 14 are allowed because the references cited fail to teach, as applicant has, translating  $\pi/4$  DQPSK symbols into quadrature phase shift keying (QPSK) symbols utilizing the formula  $S_{\text{QPSK}}(t) = (\text{real}(S(t)) + \text{imag}(S(t)) * (\text{real}(S(t-1)) - \text{imag}(S(t-1))))$ , where  $S(t)$  is a DQPSK symbol at time  $t$ , and  $S_{\text{QPSK}}(t)$  is a QPSK symbol

at time  $t$ , and mapping the QPSK symbols to a pair of bits; and translating the two communication bits to three communication bits, and mapping the translated bits to DQPSK symbols, as the applicant has claimed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Juan A. Torres whose telephone number is (571) 272-3119. The examiner can normally be reached on Monday-Friday 9:00 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad H. Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Juan Alberto Torres  
03-15-2006

TEMESGHEU GHEBRETINSAE  
PRIMARY EXAMINER  
3/26/06  
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